

Global Market for Stem Cells

Market Research Report | 2023-03-14 | 139 pages | BCC Research

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Report description:

Description

Report Scope:

This report discusses the implications of stem cell research and commercial trends in the context of the current size and growth of the pharmaceutical market, both in global terms and analyzed by the most important national markets. The important technologies supporting stem cells are reviewed, and the nature and structure of the stem cell industry is discussed, with profiles of the leading companies, including recent merger and acquisition (M&A) activity. Five-year sales forecasts are provided for the national markets and the major therapeutic categories of the products involved.

Report Includes:

- 18 data tables and 14 additional tables
- An up-to-date overview and analysis of the global markets for (biological) stem cells and related products
- Analyses of the global market trends, with historic revenue data for 2021, estimates for 2022 and 2023, and projections of compound annual growth rates (CAGRs) through 2027
- Estimation of the actual market size and revenue forecast for global stem cells market in USD million terms, and corresponding market share analysis by product, application, end user, and region
- Highlights of emerging technology trends, market opportunities and deterrents estimating current and future demand of stem cells related products and their derivatives for drug discovery
- Discussion of market dynamics that impact the growth of the market for biological stem cells, clinical applications, market regulations, industry structure, and penetration of technologies within the biotech industry
- Review of the patents and patent applications on stem cell research, and corresponding research/scientific publications during the analysis period

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- Competitive landscape of the key manufacturers and suppliers of the stem cell-related drug market, their product portfolios, financial updates, and major growth strategies within the marketplace
- Company profiles of major players within the industry, including 3-D Matrix Medical Technology, International Stem Cell Corp., ReNeuron Group, and U.S. Stem Cell Inc.

Executive Summary

Summary:

Definitions

Stem cells are the first cells formed when an egg and a sperm join, and the resultant zygote begins to divide. They are the precursors of all the different types of cells that make up the body. They are characterized by self-renewal, which is the capacity to continue dividing to make ever-larger populations of stem cells, as well as the capacity to differentiate into any mature cell type when they receive appropriate chemical instructions.

Several broad categories of stem cells exist, including embryonic stem cells, which are derived from blastocysts; fetal stem cells, which are obtained from aborted fetuses; adult stem cells, which are found in adult tissues; cord blood stem cells, which are isolated from umbilical tissue; cancer stem cells, which give rise to a clonal populations of cells that form tumors or disperse in the body; and animal stem cells, which are derived from non-human sources.

Applications

In a developing embryo, stem cells can differentiate into all of the specialized embryonic tissues. In adult organisms, stem and progenitor cells act as a repair system for the body, replenishing specialized cells. Researchers are interested in the potential for using stem cells to treat conditions, including diabetes, cardiovascular disease and neurological disorders, by replacing defective cells and tissues; ideally, stem cells function as the raw material from which new populations of normal differentiated cells and tissues develop.

Stem cells can also be used in pharmaceutical research to improve drug target validation and toxicology screening. This is of intense interest to pharmaceutical companies, as it offers a safer alternative to the use of living organisms, including humans, for some aspects of drug testing. Stem cells are also being studied for their ability to improve both the understanding and treatment of birth disorders.

Research and Commercialization

A sizeable stem cell research product market has emerged to facilitate the research resulting from interest in stem cell applications. Large companies selling stem cell research products include Invitrogen, BD Biosciences, Thermo Fisher Scientific and Millipore. Products offered by these companies include antibodies to stem cell antigens, bead-based stem cell separation systems, stem cell protein purification and analysis tools, tools for DNA- and RNA-based Characterization of stem cells, stem cell culture and media reagents, stem-cell-specific growth factors and cytokines, tools for stem cell gene regulation, a range of stem cell services, tools for in vivo and in vitro stem cell tracking, and stem cell lines.

The major market for stem cells will be their use in the treatment of disease, and there are already numerous companies specializing in developing stem cells directed toward specific disease targets. This market opportunity is still largely at an early, experimental stage. The main exception is the use of stem cells taken from the patient's own bone marrow to treat conditions such as leukemia, which is a failure of normal hematopoiesis (i.e., formation of blood cells). This use of stem cells is well

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established.

A third market opportunity has arisen in the stem cell field based on the collection and preservation of stem cells from the umbilical cord blood after a baby is born. The cells are kept frozen in "cord blood banks" so they may be used by the donor later in life to treat appropriate diseases. This use of stem cells is not generally endorsed by the medical profession, but it has given rise to a kind of medical tourism.

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BEIKE BIOTECHNOLOGY CO. LTD.

BRAINSTORM CELL THERAPEUTICS INC.

CELYAD

CYTORI THERAPEUTICS INC.

EPISTEM LTD.

FUJIFILM CELLULAR DYNAMICS INC. (FCDI)

GAMIDA CELL LTD.

HYBRID ORGAN GMBH

INTERNATIONAL STEM CELL CORP.

ARTERIOCYTE MEDICAL SYSTEMS INC. (ISTO BIOLOGICS)

LISATA THERAPEUTICS.

MESOBLAST LTD.

RENEURON GROUP

STEMEDICA CELL TECHNOLOGIES INC.

STEMINA BIOMARKER DISCOVERY INC.

STEMPEUTICS

U.S. STEM CELL INC.

VERICEL CORP.

VERASTEM INC.

VIACYTE INC.

VITRO BIOPHARMA

WICELL RESEARCH INSTITUTE

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